maintained because of the presence of the second absorbent barrier layer that is non-disintegrating.

In light of the claims as amended, Applicants respectfully traverse the rejection. Chen teaches that the absorbent layers be produced to maximize absorbency while maintaining sufficient cohesive strength to resist disintegrating after absorption within that single layer. To accomplish that goal, Chen further teaches using absorbent layers with absorbency of 100 to 300 percent in part by choosing amounts of hydrophilic ethylenically unsaturated monomers between 10 and 60 parts by weight. Even assuming that the absorbencies of each layer may have different absorbency by differing amounts of monomer, this must be viewed in light of the overall teaching of Chen to maximize absorbency without sacrificing structural integrity. Chen thus suggests the construction of multiple layers wherein each layer maximizes absorption while maintaining integrity.

In contrast, the present invention effectively removes this balancing of absorption versus integrity within an absorbent layer by separating each function into different layers. The present invention discloses absorbency of the first absorbent layer in excess of 300 percent with amounts of hydrophilic, ethylenically unsaturated monomer in amounts up to 80 parts by weight. The first absorbent layer is constructed to absorb excessive amounts of wound exudate which could disintegrate at the levels and rate of absorption if used as a single layer. The second nondisintegrating layer is constructed with a lower absorption rate that provides a physical barrier, controls rate of absorption, and provides physical strength. Thus, the second disintegrating layer also ensures greater integrity by controlling rate of uptake to the first absorbent layer than the first absorbent layer would have if used as a single layer. See Applicants' Specification, page 12, lines 9-20.

The Examiner has also suggested that different absorbencies are inherent in Chen based on which layer is closest to the wound. However, this is an improper inherency argument in that the capability of a layer to absorb wound exudates is not determined by what is actually absorbed in use.

For all the above reasons, the disclosure of the Chen reference fails to render the present claims obvious. Accordingly, the Applicants respectfully request that the §103(a) rejection be withdrawn.

Secondary References

Secondary references Dahmen, Gilbert, and D'Haese do not cure the deficiencies of Chen for the following reasons. As an initial matter, there is no suggestion or motivation contained in any of the secondary references to combine their teachings with the Chen reference, and the Examiner has not identified any such motivation or suggestion. Also, even were the combinations proper, each of the combined references fails to suggest the present claims.

Claims 12 and 53-55 have been rejected under 35 USC § 103(a) as being unpatentable over Chen et al in view of Dahmen (US 6,060,557). Dahmen discloses a superabsorbent polymer composition capable of absorbing large amounts of aqueous liquids. The Examiner cites Dahmen for the use of n-vinyl acetamide in combination with Chen. First, Dahmen makes no disclosure of the integrity of the superabsorbent polymers, and provides no suggestion that the n-vinyl acetamide would satisfy the requirements of Chen to maintain structural integrity within the polymer ranges disclosed. Further, Dahmen teaches a partially-neutralized polymer composition contiaing n-vinyl acetamide that is ground to form a fine powder which arguably would not maintain the transparency required of the hydrogel in Chen.

Claims 21, 35 and 42-44 have been rejected under 35 USC § 103(a) as being unpatentable over Chen et al in view of Gilbert (US 4,867,150). Gilbert teaches perforations in a wound-facing layer. Gilbert fails to disclose or suggest the use of absorbent wound layers with any specific percent absorbency, particularly layers exceeding 300 percent, or use of multiple absorbent layers.

Claims 45-52 have been rejected under 35 USC § 103(a) as being unpatentable over Chen et al in view of D'Haese (US 5,270,111). D'Haese teaches the use of pressure sensitive adhesive tapes that can withstand exposure to body fluids but disperse when exposed to aqueous alkali solutions during laundering. D'Hause fails to disclose any absorbency layers. Rather, D'Hause teaches away from use of his invention for absorbency by describing the pressure sensitive adhesive as moisture resistant when exposed to body fluids (Col. 4, lines 21-25).

Thus, none of the references can be combined (and are not properly combined) to render the present claims obvious. Applicants submit, therefore, that the rejected claims are patentable under 35 U.S.C. § 103(a).

Conclusion

In view of the arguments and amendments offered herein, Applicants respectfully submit that the Examiner's grounds for objection and rejection are overcome and respectfully solicit reconsideration and withdrawal of the rejections and allowance of the application.

Respectfully submitted,

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1. (Amended) A multi-layer wound dressing comprising:

a first absorbent layer with an absorbency greater than 300 percent and containing the reaction product of a hydrophilic, ethylenically unsaturated monomer; and

a second absorbent non-disintegrating layer in contact with the first absorbent layer and less absorbent of body fluids than the first absorbent layer;

wherein the wound dressing is configured to be positioned on a patient's wound such that the second absorbent layer is between the first absorbent layer and the wound.

30. (Amended) A multi-layer wound dressing comprising:

a first absorbent layer having an absorbency of greater than 300 percent [at least 200 percent] and containing less than 10 percent by weight water before application to a patient; and

a second absorbent layer having an absorbency of less than 50 percent of the absorbency of the first absorbent layer;

wherein the wound dressing is configured to be positioned on a patient such that the second absorbent layer is between the first absorbent layer and the wound.